

## **REMARKS/ARGUMENTS**

### **Claim Rejections – 35 USC 103**

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gushima et al. (US 2001/0038586) in view of Kodama (US 5606468).

5 Response:

According to the phone interview with Examiner on Mar. 05, 2009, Examiner said that applicant's arguments are correct, and in the previous Office action Examiner was misinterpreting applicant's claimed limitations when Examiner examined the instant application. In response to the Office action dated 12/18/2008, the arguments which  
10 clearly point out the fact that the claimed limitation is misinterpreted by Examiner are respectfully submitted as per Examiner's suggestion to request reconsideration of the patentability of the instant application.

### **Claims 1 and 8**

15 On page 2 of the Office action dated 12/18/2008, Examiner pointed out: "The electrical path ends at the laser diode and becomes an optical path. The electrical path begins again at the photodiode," and stated that the claimed limitation "the electrical channel tested by the optical drive controller does not include an electrical path between the laser diode driver and the laser diode" has been taught by Gushima et al. Besides, in  
20 the section Response to Arguments on page 5 of the Office action dated 12/18/2008, Examiner also stated: "The claim states that the channel tested does not include an electrical path between the diode and the driver. There is no electrical path between the diode and the driver in the channel tested because the diode and the photodetector are optically coupled. This optical coupling stops the electrical feedback between the diode  
25 and the driver". The applicant respectfully disagrees with Examiner's point of view, and would like to point out that the claimed limitations are mistakenly considered by Examiner. Rationale is given as follows.

As clearly shown in Fig. 5 of applicant's disclosure, the WSR channels (38)  
30 between the optical disk drive controller (30) and the laser diode driver (32) are tested.

In other words, the electrical path between the laser diode driver (32) and the laser diode (34) are not tested.

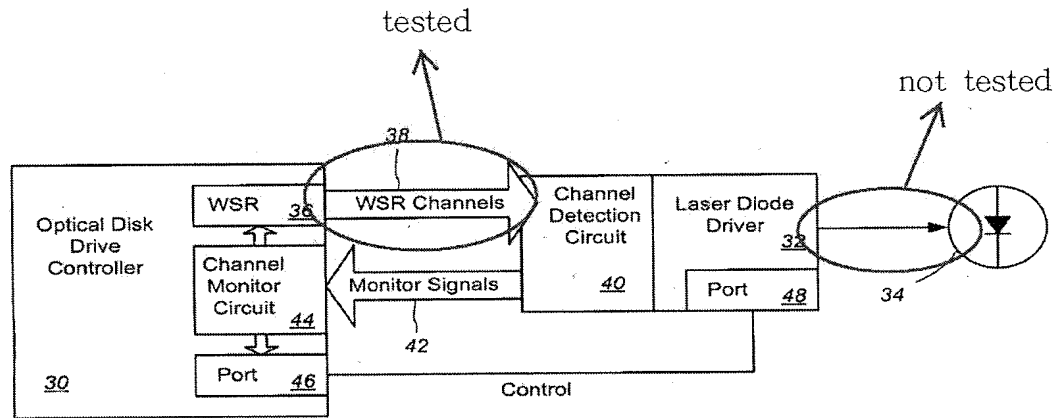


FIG. 5

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Therefore, applicant's claims 1 and 8 clearly define that the electrical channel tested by the optical drive controller **does not include** an electrical path between the **laser diode driver** and the **laser diode**, where the laser diode driver is to drive the laser diode, and the laser diode driven by the laser diode driver is to output a light signal corresponding to data to be recorded to an optical disc.

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Claim 1: An optical drive device, comprising:

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an optical drive controller adapted to couple to a laser diode driver and to cause **the laser diode driver to provide signals to drive a laser diode to output a modulated light signal corresponding to data to be written to an optical disk**, the optical drive controller testing timing characteristics of an electrical channel between the optical drive controller and the laser diode driver and generating a set of calibration signals to program a laser diode drive characteristic associated with the laser diode driver in response to the testing of the electrical channel between the optical drive controller and the laser diode driver;

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wherein **the electrical channel tested by the optical drive controller does not include an electrical path between the laser diode driver and the laser diode.**

5 Claim 8: An optical drive device, comprising:

an optical drive controller;

10 **a laser diode driver providing drive signals to a laser diode**, the laser diode driver responsive to the optical drive controller to selectively provide read drive signals or write drive signals to the laser diode, the write drive signals **causing the laser diode to output a modulated light signal corresponding to data to be written to an optical disk;** and

15 an electrical channel coupling the optical drive controller to the laser diode driver, the electrical channel communicating read signals or write signals between the optical drive controller and the laser diode driver, the optical drive controller testing timing characteristics of the electrical channel by outputting timing test signals over the electrical channel, the laser diode driver receiving the timing test signals from the electrical channel and operating on the timing test signals from the  
20 electrical channel to responsively generate a monitor signal, the laser diode driver providing the monitor signal to the optical drive controller; wherein **the electrical channel tested by the optical drive controller does not include an electrical path between the laser diode driver and the laser diode.**

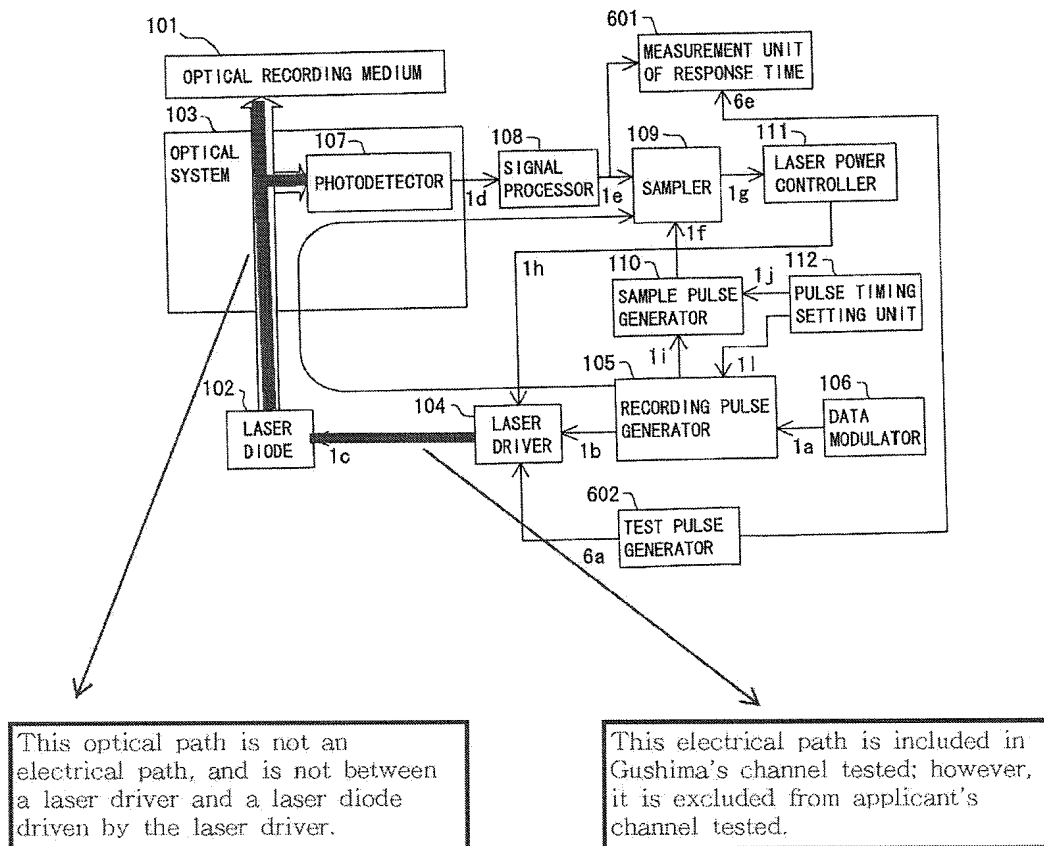
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With regard to the cited Gushima reference, Gushima expressly discloses that the propagation delay time of the propagation path, including the **laser driver (104), the laser diode (102)**, the photodetector (107) and the signal processor (108) is measured by the device shown in Gushima Fig.4 (paragraph [0064]); in addition, the measurement unit of  
30 response time (601) shown in Gushima Fig.4 is implemented to measure the sum of the

propagation delay time and the setting time (paragraphs [0083] and [0084]). Note is therefore made by the applicant that the electrical path between Gushima's laser diode (102) and laser driver (104) must be involved in the response characteristic measurement according to teachings of Gushima.

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*Fig. 4*



As the optical path between the laser diode (102) and the photodetector (107) is not an electrical path, Examiner therefore deems that the claimed limitation “the electrical channel tested by the optical drive controller does not include an electrical path between the laser diode driver and the laser diode” is taught by Gushima: “The electrical path ends at the laser diode and becomes an optical path. The electrical path begins again at the photodiode (page 2 of the Office action dated 12/18/2008)” and “There

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is no electrical path between the diode and the driver in the channel tested because the diode and the photodetector are optically coupled. This optical coupling stops the electrical feedback between the diode and the driver (page 5 of the Office action dated 12/18/2008)". However, the applicant respectfully points out that **the claimed**

5 **limitation recited in applicant's claims 1 and 8 is mistakenly considered by Examiner.** The major difference between the claimed features of the instant application and teachings of the cited Gushima reference is briefly summarized as below:

- 10 1. As mentioned above, applicant's claims 1 and 8 clearly define that the claimed **laser diode driver** is to **drive the laser diode**, and the claimed **laser diode driven by the laser diode driver** is to **output a light signal corresponding to data to be recorded to an optical disc**. Therefore, Gushima's photodetector (107) used to detect laser light emitted from the laser diode (102) fails to read on the claimed laser diode driver used to drive the laser diode to emit light onto the  
15 optical disc.
2. As clearly shown in Gushima Fig. 4, **the electrical path between the laser driver (104) and the laser diode (102) must be included in the tested path.**
3. The claimed limitation "the electrical channel tested by the optical drive controller does not include an **electrical path between the laser diode driver and the laser**  
20 **diode**" specifies that the electrical path between the laser diode driver and the laser diode is excluded from the electrical channel tested. However, **this claimed limitation does not define that there is no electrical path between the laser diode driver and the laser diode**. Therefore, Examiner's interpretation "the claim states that the channel tested does not include an electrical path between the diode and the  
25 driver" is incorrect. Furthermore, Gushima's **optical path** between the laser diode (102) and the photodetector (107) has nothing to do with the claimed limitation "the electrical channel tested by the optical drive controller does not include an **electrical path** between the laser diode driver and the laser diode". Specifically, using Gushima's **optical path** to read on the **electrical path** recited in applicant's  
30 claims 1 and 8 is improper and illogical.

In view of above, the applicant therefore contends that the claimed limitation “the electrical channel tested by the optical drive controller does not include an electrical path between the laser diode driver and the laser diode” as recited in claims 1 and 8 is neither  
5 taught nor suggested by the combined teaching of Gushima and Kodama. (*emphasis added*) Withdrawal of the rejections and reconsideration of the patentability of claims 1 and 8 is respectfully requested.

Claims 2-7 and 9-13

10        Claims 2-7 and 9-13 are dependent upon claims 1 and 8, respectively, and should be allowed if claims 1 and 8 are found allowable.

**Conclusion**

15        Based on the above remarks/arguments, the applicant respectfully submits that all of the rejections set forth in the Office action dated 12/18/2008 have been overcome and all of the pending claims 1-13 are now in condition for allowance. Withdrawal of the rejections and reconsideration of the patentability of the pending claims is respectfully requested. If a telephone conference would facilitate the prosecution of this application, the Examiner is invited to contact the undersigned applicant’ representative at the number  
20 indicated below.

Appl. No. 10/623,264  
Amdt. dated March 18, 2009  
Reply to Office action of December 18, 2008

Sincerely yours,

\_\_\_\_\_/Winston Hsu/\_\_\_\_\_  
Winston Hsu, Patent Agent No. 41,526

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- 10 Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,264	07/18/2003	Chia-Hua Chou	MTKP0720USA	3497
27765 7590 03/17/2009 NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116				
			EXAMINER HALEY, JOSEPH R	
			ART UNIT 2627	PAPER NUMBER
			NOTIFICATION DATE 03/17/2009	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

winstonhsu.uspto@gmail.com  
Patent.admin.uspto.Rcv@naipo.com  
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<b>Interview Summary</b>	<b>Application No.</b> 10/623,264	<b>Applicant(s)</b> CHOU ET AL.	
	<b>Examiner</b> JOSEPH HALEY	<b>Art Unit</b> 2627	

All participants (applicant, applicant's representative, PTO personnel):

(1) JOSEPH HALEY. (3) \_\_\_\_\_.

(2) Scott Margo. (4) \_\_\_\_\_.

Date of Interview: 04 March 2009.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.  
If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: 1 and 8.

Identification of prior art discussed: Gushima et al. (US 2001/0038586).

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: The examiner agreed with applicant's arguments that Gushima et al. teaches testing an electrical channel between the diode driver and the diode. The examiner stated that a new ground of rejection would be necessary.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

/Joseph Haley/ Examiner, Art Unit 2627	
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